



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

NOV 25 2015

Ref: 8ENF-UFO

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 05-10 Well (EPA Permit ID # UT20736-04234, API # 43-013-30938) - Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

On October 20, 2015, the Environmental Protection Agency received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the follow up mechanical integrity test (MIT) conducted on October 5, 2015. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 5, 2020.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Connor
Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

	GREEN	BLUE	CBI
3		1	

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

NOV 25 2015

Ref: 8ENF-UFO

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 05-10 Well (EPA Permit ID # UT20736-04234, API # 43-013-30938) - Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

On October 20, 2015, the Environmental Protection Agency received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the follow up mechanical integrity test (MIT) conducted on October 5, 2015. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 5, 2020.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Connor
Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee

bcc: Randy Brown (8P-TA)
Kimberly Pardue-Welch (8ENF-W)
Gary Wang (8ENF-UFO)

Cc addresses:

Shaun Chapoose, Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

NOV 25 2015

Ref: 8ENF-UFO

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 05-10 Well (EPA Permit ID # UT20736-04234, API # 43-013-30938) - Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

On October 20, 2015, the Environmental Protection Agency received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the follow up mechanical integrity test (MIT) conducted on October 5, 2015. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 5, 2020.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

SIGNED
Darcy O'Connor

Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8ENF-UFO

CONCURRENCE COPY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth
District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Diff format both on letters?

2 spaces

Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 05-10 Well (EPA Permit ID # UT20736-04234, API # 43-013-30938) ~~located in the~~ Antelope Creek Oil Field, Duchesne County, Utah

my phone

Dear Mr. Farnsworth:

On October 20, 2015, the Environmental Protection Agency received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the followup mechanical integrity test (MIT) conducted on October 5, 2015. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 5, 2020.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

why so much white space @ Bottom margin? - why is top margin on reverse not .75?

CONCUR	Author + ext.	First initial + last name	KPW	gao	JHE (PES)	JHE FOR KES	AP	Ky for AB	BA
	<i>[Signature]</i>	Office code	ENF-W	8ENF-UFO	8ENF-L	8ENF-L	ENF-W	ENF-PES	8P-W
	6198	Date	11/2/15	11/3/15	11/4/15	11/4/15	11/9/15	11/10/15	11/23/15

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Shaun L. McGrath
Regional Administrator

cc: Shaun Chapoose, Chairman
✓ Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
✓ Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
✓ Uintah & Ouray Business Committee

bcc: Randy Brown (8P-TA)
Kimberly Pardue-Welch (8ENF-W)
Gary Wang (8ENF-UFO)

7 on official copy only

Cc addresses:

Shaun Chapoose, Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8ENF-UFO

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 05-10 Well (EPA Permit ID # UT20736-04234, API # 43-013-30938) - Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

On October 20, 2015, the Environmental Protection Agency received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the follow up mechanical integrity test (MIT) conducted on October 5, 2015. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 5, 2020.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Connor
Acting Assistant Regional Administrator
Office of Partnership and Regulatory Assistance

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee

bcc: Randy Brown (8P-TA)
Kimberly Pardue-Welch (8ENF-W)
Gary Wang (8ENF-UFO)

Cc addresses:

Shaun Chapoose, Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

CONCUR								Date	
								Office code	
								First Initial + last name	Author + ext.

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee

*Gary/Don-You
Can't put CCS
& be's on same
page w/ original
letter Di*

bcc: Randy Brown (8P-TA)
Kimberly Pardue-Welch (8ENF-W)
Gary Wang (8ENF-UFO)

Cc addresses:

Shaun Chapoose, Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8ENF-UFO

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 05-10 Well (EPA Permit ID # UT20736-04234, API # 43-013-30938) located in the Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

On October 20, 2015, the Environmental Protection Agency received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the follow up mechanical integrity test (MIT) conducted on October 5, 2015. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 5, 2020.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Shaun L. McGrath
Regional Administrator



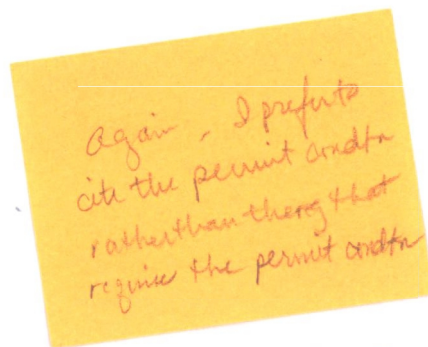
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8ENF-UFO

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066



Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 05-10 Well (EPA Permit ID # UT20736-04234, API # 43-013-30938) - Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

On October 20, 2015, the Environmental Protection Agency received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the follow up mechanical integrity test (MIT) conducted on October 5, 2015. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 5, 2020.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Conner
Acting Assistant Regional Administrator
Office of Partnership and Regulatory Assistance

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee

bcc: Randy Brown (8P-TA)
Kimberly Pardue-Welch (8ENF-W)
Gary Wang (8ENF-UFO)

Cc addresses:

Shaun Chapoose, Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

							Date	CONCUR
							Office code	
							Author + ext. First initial + last name	

7009 3410 0000 2600 2556

U.S. Postal Service TM	
CERTIFIED MAIL TM RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com	
OFFICIAL USE	
Postage \$	Postmark Here
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total P.	
Sent To	
Street, Apt. or PO Box	
City, State	

Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 West 3000 South Ioka Lane
P.O. Box 2653
Roosevelt, UT 84066

Delivered
12/11/15 per
USPS website

PS Form 3800, August 2006 See Reverse for Instructions



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

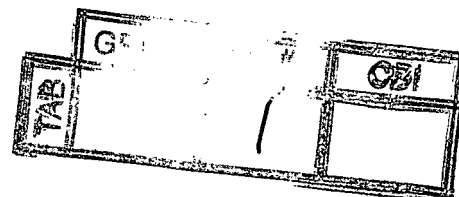
SEP 23 2015

Ref: 8ENF-UFO

CERTIFIED MAIL 7009-3410-0000-2600-8558
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-10 Well
EPA Permit ID# UT20736-04234
API # 43-013-30938
Antelope Creek Oil Field
Duchesne County, Utah



Dear Mr. Farnsworth:

On September 11, 2015, the Environmental Protection Agency (EPA) learned that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on September 7, 2015. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. § 144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

Pursuant to the above-referenced UIC Permit and the regulations at 40 C.F.R. § 144.51(q)(2), you must immediately cease injection into this well. Before injection may resume, you must demonstrate that the well has mechanical integrity by passing a mechanical integrity test (MIT). You must also receive written authorization from the EPA.

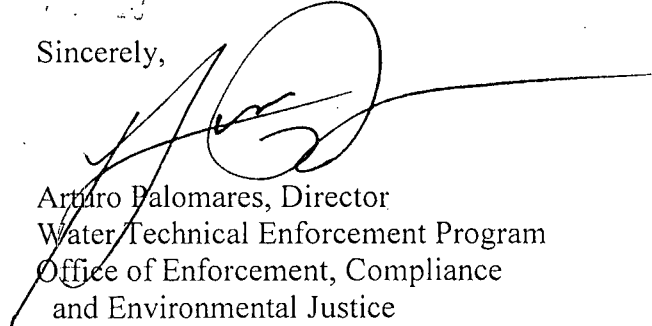
Within thirty (30) days of receipt of this letter, please submit a letter describing what action you intend to take regarding the well, including a time frame in which you anticipate the work to be completed. It is expected that you will return this well to compliance within ninety (90) days of the loss of mechanical integrity.

If you choose to plug and abandon this well, the approved plugging and abandonment plan that is incorporated into the permit must be followed. Any deviation from that plan must be submitted to the EPA for approval prior to the plugging operation.

Failure to comply with the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitutes one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

A handwritten signature in black ink, appearing to read 'Arturo Palomares', is written over the typed name and title. The signature is fluid and cursive, with a long horizontal line extending to the right.

Arturo Palomares, Director
Water Technical Enforcement Program
Office of Enforcement, Compliance
and Environmental Justice

cc: Shaun Chapoose, Chairman, Uintah & Ouray Business Committee
Edred Secakuku, Vice-Chairman, Uintah & Ouray Business Committee
Reannin Tapoof, Executive Assistant, Uintah & Ouray Business Committee
Brad Hill, Utah Division of Oil, Gas and Mining



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8ENF-UFO

CONCURRENCE COPY

CERTIFIED MAIL 7009-3410-0000-2600-8558
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-10 Well
EPA Permit ID# UT20736-04234
API # 43-013-30938
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Farnsworth:

On September 11, 2015, the Environmental Protection Agency (EPA) learned that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on September 7, 2015. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. § 144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

Pursuant to the above-referenced UIC Permit and the regulations at 40 C.F.R. § 144.51(q)(2), you must immediately cease injection into this well. Before injection may resume, you must demonstrate that the well has mechanical integrity by passing a mechanical integrity test (MIT). You must also receive written authorization from the EPA.

Within thirty (30) days of receipt of this letter, please submit a letter describing what action you intend to take regarding the well, including a time frame in which you anticipate the work to be completed. It is expected that you will return this well to compliance within ninety (90) days of the loss of mechanical integrity.

CONCUR	Author + ext.	First initial + last name	G. W. R. M. G.	J. Dally					
	Office code		8ENF-UFO	8ENF-UFO					
	Date		9/11/15	9/14/15					

If you choose to plug and abandon this well, the approved plugging and abandonment plan that is incorporated into the permit must be followed. Any deviation from that plan must be submitted to the EPA for approval prior to the plugging operation.

Failure to comply with the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitutes one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Arturo Palomares, Director
Water Technical Enforcement Program
Office of Enforcement, Compliance
and Environmental Justice

cc: Shaun Chapoose, Chairman, Uintah & Ouray Business Committee
Edred Secakuku, Vice-Chairman, Uintah & Ouray Business Committee
Reannin Tapoof, Executive Assistant, Uintah & Ouray Business Committee
Brad Hill, Utah Division of Oil, Gas and Mining

bcc: Jennifer Harris (8P-TA)
Kimberly Pardue-Welch (8ENF-W)
Gary Wang (8ENF-UFO)

Cc addresses:

Shaun Chapoose, Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Brad Hill
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

ROUTING AND TRANSMITTAL SLIP

Date

09/11/15

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Don Breffle	DB	9/11/15
2. Gary Wang	On Concur Page	
3. Joan Detty	JD	9/14/15
4. Art Palomares	AD	9/21/15
5. Joan Detty - mail and fax - 435-722-9145	JD	9/23/15
6.		
7.		
8.		
9.		
10.		

<input type="checkbox"/> Action	<input type="checkbox"/> File	<input type="checkbox"/> Note and Return
<input type="checkbox"/> Approval	<input type="checkbox"/> For Clearance	<input type="checkbox"/> Per Conversation
<input type="checkbox"/> As Requested	<input type="checkbox"/> For Correction	<input type="checkbox"/> Prepare Reply
<input type="checkbox"/> Circulate	<input type="checkbox"/> For Your Information	<input type="checkbox"/> See Me
<input type="checkbox"/> Comment	<input type="checkbox"/> Investigate	<input checked="" type="checkbox"/> Signature
<input type="checkbox"/> Coordination	<input type="checkbox"/> Justify	

REMARKS

Petroglyph has lost mechanical integrity on this well.

G:\UFO\UIC\UIC VITAL RECORDS\UIC CORRESPONDENCE\FY13
 \Cease_injection_Petroglyph_UT20736-04234_2015-09-11.doc

Before signature by the appropriate official, this enforcement matter requires confirmation by TEP and/or LEP staff that either: 1) it contains no information claimed to be Confidential Business Information (CBI); or 2) any such information has been redacted from any version of the document which may be distributed to anyone other than U.S. government personnel or the party claiming the information to be CBI. In addition, if there is a CBI claim, that fact must be noted prominently on the first page of the document. Initialing the slip above constitutes such confirmation by the ECEJ staff assigned to this matter.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No. - Bldg.
	Phone No.

OPTIONAL FORM 41 (Rev. 1-94)
 Prescribed by GSA

7009 3410 0000 2600 8558

U.S. Postal Service™ CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com	
OFFICIAL USE	
Postage \$	Postmark Here
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage	
Sent To: Mr. Les Farnsworth, District Supervisor Petroglyph Operating Company, Inc. Street, Apt. No., or PO Box No.: 4116 W. 3000 S Ioka Lane City, State, ZIP+: P.O. Box 607 Roosevelt, Utah 84066	

DER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

SFP 24 2015

Mr. Les Farnsworth, District Supervisor
 Petroglyph Operating Company, Inc.
 4116 W. 3000 S Ioka Lane
 P.O. Box 607
 Roosevelt, Utah 84066

2. Article Number
 (Transfer from service label)

PS Form 3811, February 2004

COMPLETE THIS SECTION ON DELIVERY

A. Signature ☒ Agent ☐ Addressee
 X *[Signature]*
 B. Received by (Printed Name) C. Date of Delivery
Rodriguez Jurado 9-29-15
 D. Is delivery address different from item 1? ☐ Yes
 If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

7009 3410 0000 2600 8558

Domestic Return Receipt

102595-02-M-1540

Inspection Report For Well: UT20736 - 04234

U.S. Environmental Protection Agency
Underground Injection Control Program, 8ENF-T
999 18th Street, Suite 300, Denver, CO 80202-2466

This form was printed on 9/24/2013

INSPECTOR(S): Lead: Roberts, Sarah

Date: ¹²10/10/2013

Others: Ajayi, Christopher

Time: 10:05 am

OPERATOR (only if different):

REPRESENTATIVE(S):

Chad Steensen

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name: Ute Tribal 05-10 (old 3-5E3)

Well Type: Enhanced Recovery (2R)

Operating Status: AC (ACTIVE) as of 12/31/2002

Oil Field: Antelope Creek (Duchesne)

Location: SENW S5 T5S R3W

Indian Country: X, Uintah and Ouray

Last Inspection: 8/28/2012

Allowable Inj Pressure: 2055 /

Last MIT: Pass 1/9/2009

Annulus Pressure From Last MIT: 1170

BLACK = POSSIBLE VIOLATION

GREY = DATA MISSING

INSPECTION TYPE: (Select One)

☐ Construction / Workover

☐ Response to Complaint

☐ Other

☐ Plugging

☒ Routine

ICIS Entered

☐ Post-Closure

☐ Witness MIT

Date 12/19/13

Initials JB

OBSERVED VALUES:

Tubing Gauge:

☒ Yes
☐ No

Pressure: U: 1902 / L: _____ psig

Gauge Range: 5 data psig

Gauge Owner:

☐ EPA

☒ Operator

Annulus Gauge:

☒ Yes
☐ No

Pressure: 0 psig

Gauge Range: opened manually psig

Gauge Owner:

☒ EPA

☐ Operator

Bradenhead Gauge:

☐ Yes
☐ No

Pressure: _____ psig

Gauge Range: _____ psig

Gauge Owner:

☐ EPA

☐ Operator

Pump Gauge:

☐ Yes
☐ No

Pressure: _____ psig

Gauge Range: _____ psig

Gauge Owner:

☐ EPA

☐ Operator

Operating Status:
(Select One)

☒ Active
☐ Being Reworked

☐ Not Injecting
☐ Production

☐ Plugged and Abandoned
☐ Under Construction

U2 Entered

Date 12/17/13

Initial JB

See page 2 for photos, comments, and site conditions.

GREEN	BLUE
	1

Inspection Report For Well: UT20736 - 04234 (PAGE 2)

PHOTOGRAPHS:

☐

Yes

☒

No

List of photos taken: _____

Comments and site conditions observed during inspection: _____

GPS: GPS File ID: _____

Signature of EPA Inspector(s):

☐

Data Entry

☐

Compliance Staff

☐

Hard Copy Filing

NOTICE OF INSPECTION



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, 999 18TH STREET - SUITE 500
DENVER, COLORADO 80202-2405

Date: 12/10/13

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300f et seq.).

Hour: 8:00a

Firm Name: Petroglyph Operating, Inc.

Firm Address: Roosevelt, UT, Antelope Creek Oil Field

REASON FOR INSPECTION:

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable condition of permit or rule authorization.

SECTION 1445(b) of the SAFE DRINKING WATER ACT is quoted below:

Section 1445(b)(1): Except as provided in Paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials, and a written notice to any supplier of water or other person subject to (a), or person subject (A) a national primary drinking water regulation prescribed under Section 1412(B) an applicable Underground Injection Control Program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, ... facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.

Sarah Roberts
Inspector's Name & Title (Print)

[Signature]
Inspector's Signature



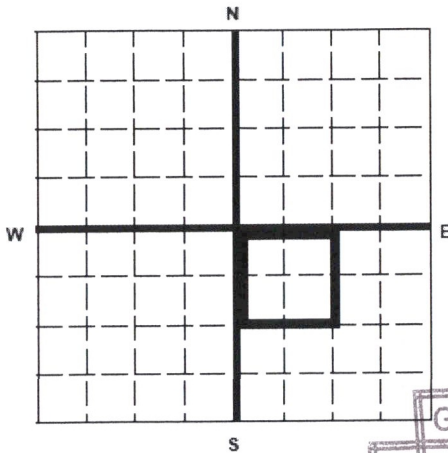
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on
Section Plat - 640 Acres



State
Utah

County
Duchesne

Permit Number
UT2736-04234

Surface Location Description

1/4 of 1/4 of NW 1/4 of SE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

Location 2068 ft. from (N/S) S Line of quarter section
and 2093 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY

- ☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
☒ Area

Number of Wells 111

U2 Entered

Date 3/24/17

Initial JS

Lease Name Ute Indian Tribe

Well Number UTE TRIBAL 05-10

INJECTION PRESSURE

TOTAL VOLUME INJECTED

TUBING - CASING ANNULUS PRESSURE
(OPTIONAL MONITORING)

MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	1578	1619	4182		0	0
February	16	1661	1674	4373		0	0
March	16	1694	1712	4653		0	0
April	16	1718	1729	4101		0	0
May	16	1740	1747	4553		0	0
June	16	1754	1769	4323		0	0
July	16	1760	1773	4094		0	0
August	16	1776	1786	4418		0	0
September	16	1780	1796	3831		0	0
October	16	1789	1804	4494		0	0
November	16	1800	1807	3759		0	0
December	16	1807	1825	4418		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Chad Stevenson, Water Facilities Supervisor

Signature

Date Signed

03/21/2017

Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

Units of Measurement: Standard

multi-chem®

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: PETROGLYPH OPERATING CO INC - EBUS

Sales Rep: James Patry

Well Name: UTE TRIBAL 05-10 INJ, TT, DUCHESNE

Lab Tech: Kaitlyn Natelli

Sample Point: Well Head

Sample Date: 1/6/2017

Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample ID: WA-345335

Sample Specifics		Analysis @ Properties in Sample Specifics			
		Cations	mg/L	Anions	mg/L
Test Date:	1/25/2017	Sodium (Na):	3924.03	Chloride (Cl):	4500.00
System Temperature 1 (°F):	300	Potassium (K):	30.36	Sulfate (SO ₄):	0.00
System Pressure 1 (psig):	2000	Magnesium (Mg):	7.28	Bicarbonate (HCO ₃):	2867.00
System Temperature 2 (°F):	130	Calcium (Ca):	18.14	Carbonate (CO ₃):	
System Pressure 2 (psig):	50	Strontium (Sr):	4.28	Hydroxide (HO):	
Calculated Density (g/ml):	1.0052	Barium (Ba):	28.82	Acetic Acid (CH ₃ COO)	
pH:	8.80	Iron (Fe):	10.36	Propionic Acid (C ₂ H ₅ COO)	
Calculated TDS (mg/L):	11419.28	Zinc (Zn):	1.77	Butanoic Acid (C ₃ H ₇ COO)	
CO ₂ in Gas (%):		Lead (Pb):	0.03	Isobutyric Acid ((CH ₃) ₂ CHCOO)	
Dissolved CO ₂ (mg/L):	0.00	Ammonia NH ₃ :		Fluoride (F):	
H ₂ S in Gas (%):		Manganese (Mn):	0.17	Bromine (Br):	
H ₂ S in Water (mg/L):	5.00	Aluminum (Al):	0.17	Silica (SiO ₂):	27.04
Tot. Suspended Solids (mg/L):		Lithium (Li):	3.03	Calcium Carbonate (CaCO ₃):	
Corrosivity (Langlier Sat. Indx)	0.00	Boron (B):	5.36	Phosphates (PO ₄):	9.38
Alkalinity:		Silicon (Si):	12.64	Oxygen (O ₂):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	1.66	15.49	0.00	0.00	4.05	4.52	3.54	7.53	0.00	0.00	0.00	0.00	0.00	0.00	10.79	0.93
149.00	267.00	1.71	15.53	0.00	0.00	3.99	4.52	3.63	7.53	0.00	0.00	0.00	0.00	0.00	0.00	10.52	0.93
168.00	483.00	1.77	15.57	0.00	0.00	3.95	4.52	3.71	7.53	0.00	0.00	0.00	0.00	0.00	0.00	10.28	0.93
187.00	700.00	1.84	15.62	0.00	0.00	3.93	4.52	3.79	7.53	0.00	0.00	0.00	0.00	0.00	0.00	10.07	0.93
206.00	917.00	1.92	15.66	0.00	0.00	3.93	4.52	3.86	7.53	0.00	0.00	0.00	0.00	0.00	0.00	9.89	0.93
224.00	1133.00	2.01	15.70	0.00	0.00	3.95	4.52	3.93	7.53	0.00	0.00	0.00	0.00	0.00	0.00	9.73	0.93
243.00	1350.00	2.10	15.74	0.00	0.00	3.99	4.52	4.00	7.53	0.00	0.00	0.00	0.00	0.00	0.00	9.59	0.93
262.00	1567.00	2.20	15.77	0.00	0.00	4.04	4.52	4.05	7.53	0.00	0.00	0.00	0.00	0.00	0.00	9.46	0.93
281.00	1783.00	2.30	15.79	0.00	0.00	4.10	4.52	4.11	7.53	0.00	0.00	0.00	0.00	0.00	0.00	9.35	0.93
300.00	2000.00	2.41	15.81	0.00	0.00	4.17	4.52	4.15	7.53	0.00	0.00	0.00	0.00	0.00	0.00	9.26	0.93

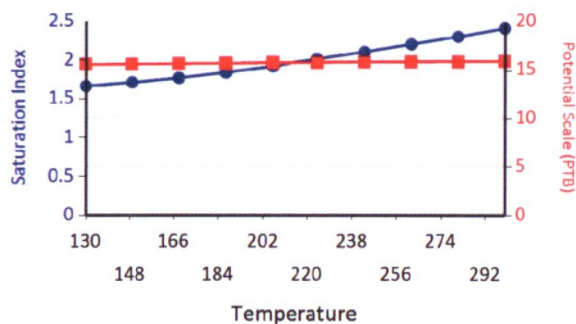
Water Analysis Report

Temp (°F)	PSI	Hemihydrate CaSO ₄ ~0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.37	1.18	10.73	0.01	4.94	14.10	2.84	21.56	13.39	8.06
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57	1.19	10.28	0.01	5.63	14.29	3.20	22.18	13.79	8.06
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.75	1.19	9.88	0.01	6.32	14.40	3.57	22.50	14.21	8.06
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.91	1.19	9.53	0.01	7.00	14.46	3.94	22.64	14.65	8.06
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	3.06	1.19	9.21	0.01	7.67	14.50	4.31	22.70	15.09	8.06
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	3.18	1.19	8.93	0.01	8.32	14.52	4.68	22.72	15.53	8.06
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30	1.19	8.68	0.01	8.95	14.53	5.04	22.73	15.97	8.06
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	3.39	1.19	8.45	0.01	9.56	14.54	5.39	22.73	16.40	8.06
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	3.47	1.19	8.24	0.01	10.14	14.54	5.72	22.73	16.82	8.06
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	3.54	1.19	8.06	0.01	10.70	14.54	6.05	22.73	17.22	8.06

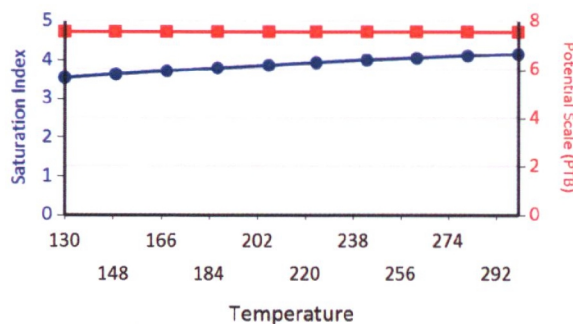
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

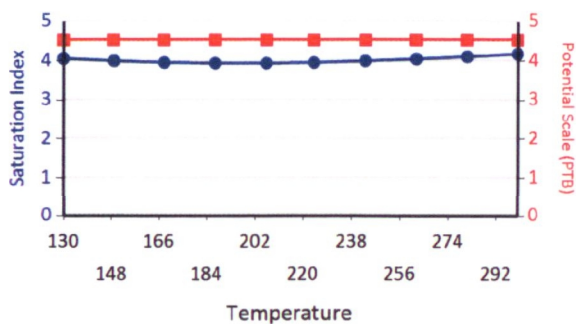
Calcium Carbonate



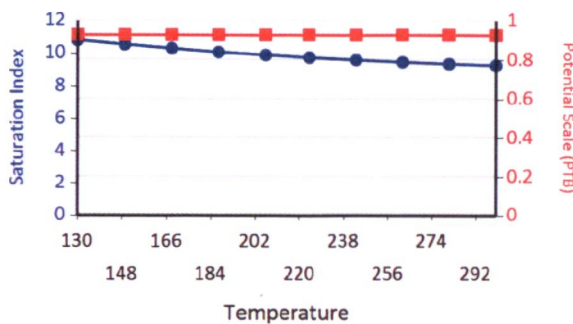
Iron Carbonate



Iron Sulfide

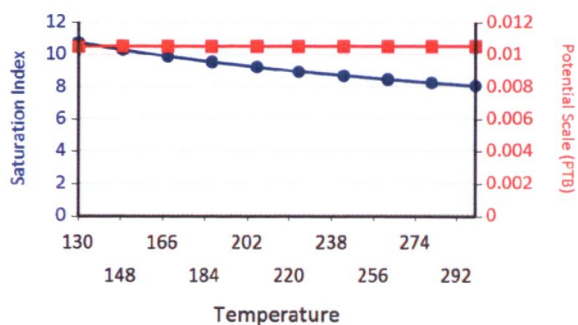


Zinc Sulfide

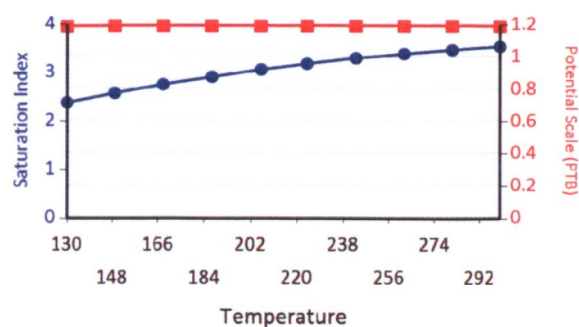


Water Analysis Report

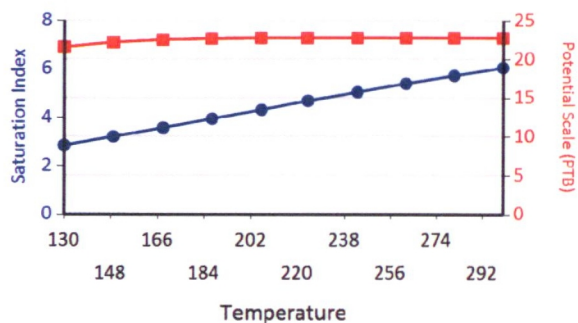
Lead Sulfide



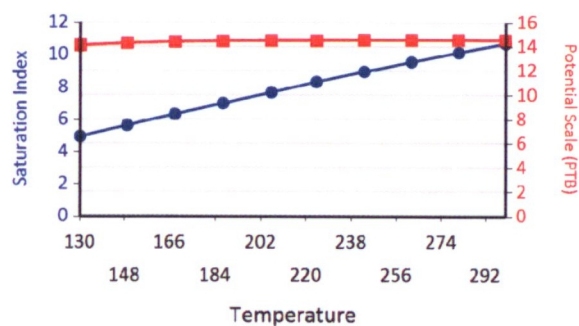
Zinc Carbonate



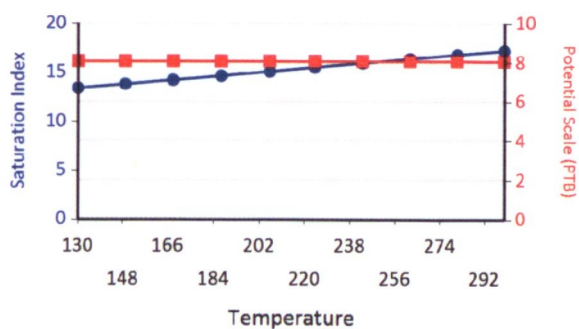
Ca Mg Silicate



Mg Silicate



Fe Silicate





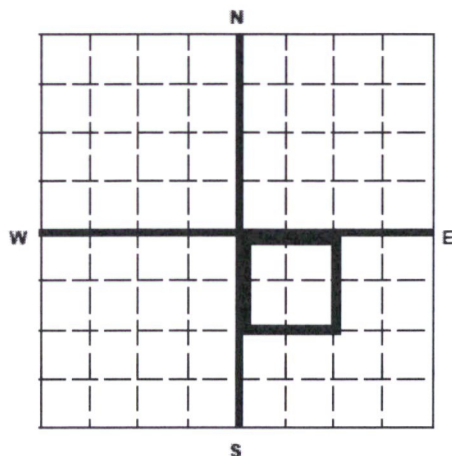
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on
Section Plat - 640 Acres



State
Utah

County
Duchesne

Permit Number
UT2736-04434 04234

Surface Location Description

1/4 of 1/4 of NW 1/4 of SE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

Location 2068 ft. from (N/S) S Line of quarter section
and 2093 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY

- ☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
☒ Area
Number of Wells 111

U2 Entered
Date 2/29/16
Initial JS

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 05-10

INJECTION PRESSURE				TOTAL VOLUME INJECTED		TUBING - CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	15	1797	1903	882		0	0
February	15	1836	1985	778		0	0
March	15	1810	1992	932		0	0
April	15	1940	1969	746		0	0
May	15	1951	1961	842		0	0
June	15	1939	1984	791		0	0
July	15	1952	1993	911		0	0
August	15	1964	2009	878		0	0
September	15	863	1994	207		0	1700
October	15	449	494	0		0	1700
November	15	505	510	0		0	0
December	15	1275	1513	3434		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

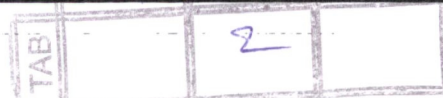
Chad Stevenson, Water Facilities Supervisor

Signature

Chad Stevenson

Date Signed

02/08/2016



Petroglyph Operating Company, Inc.
Annulus Pressure Cause and Mitigation Measures
EPA Annual Injection Report for Reporting Period 2015

Well Name: Ute Tribal 05-10

UIC Permit Number: UT2736-04234

API Number: 43-013-30938

Cause of Pressure and Mitigation Measures:

On September 7, 2015, the above referenced well lost Mechanical Integrity. Further research into the well's history led Petroglyph staff to conclude that the well's performance could be improved by injecting into perforations previously plugged back. On September 21, 2015, Petroglyph rigged up on the well. On December 3, 2015, the well was returned to injection.

Please see copy of attached notice and successful MIT test submitted to EPA on October 7, 2015.



September 8, 2015

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit #UT2736-04234
Well No. Ute Tribal 05-10
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Breffle:

Please be advised that on September 7, 2015 we lost Mechanical Integrity on the Ute Tribal 05-10 Injection Well. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,
Petroglyph Operating Company, Inc.

Rodrigo Jurado
Regulatory Compliance Specialist



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

SEP 23 2015

Ref: 8ENF-UFO

CERTIFIED MAIL 7009-3410-0000-2600-8558
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-10 Well
EPA Permit ID# UT20736-04234
API # 43-013-30938
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Farnsworth:

On September 11, 2015, the Environmental Protection Agency (EPA) learned that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on September 7, 2015. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. § 144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

Pursuant to the above-referenced UIC Permit and the regulations at 40 C.F.R. § 144.51(q)(2), you must immediately cease injection into this well. Before injection may resume, you must demonstrate that the well has mechanical integrity by passing a mechanical integrity test (MIT). You must also receive written authorization from the EPA.

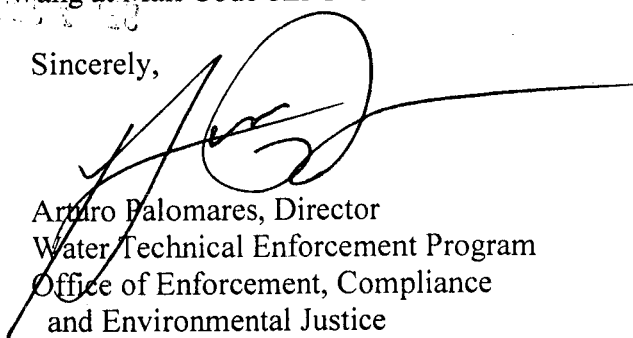
Within thirty (30) days of receipt of this letter, please submit a letter describing what action you intend to take regarding the well, including a time frame in which you anticipate the work to be completed. It is expected that you will return this well to compliance within ninety (90) days of the loss of mechanical integrity.

If you choose to plug and abandon this well, the approved plugging and abandonment plan that is incorporated into the permit must be followed. Any deviation from that plan must be submitted to the EPA for approval prior to the plugging operation.

Failure to comply with the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitutes one or more violations of the Safe Drinking Water Act, 42 U.S.C. § 300h. Such non-compliance may subject you to formal enforcement by the EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,



Arturo Palomares, Director
Water Technical Enforcement Program
Office of Enforcement, Compliance
and Environmental Justice

cc: Shaun Chapoose, Chairman, Uintah & Ouray Business Committee
Edred Secakuku, Vice-Chairman, Uintah & Ouray Business Committee
Reannin Tapoof, Executive Assistant, Uintah & Ouray Business Committee
Brad Hill, Utah Division of Oil, Gas and Mining

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-3504
1. TYPE OF WELL Water Injection Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: PETROGLYPH OPERATING CO		7. UNIT or CA AGREEMENT NAME: ANTELOPE CREEK
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste 500, Boise, ID, 83703		8. WELL NAME and NUMBER: UTE TRIBAL 05-10
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2068 FSL 2093 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 05 Township: 05.0S Range: 03.0W Meridian: U		9. API NUMBER: 43013309380000
9. FIELD and POOL or WILDCAT: ANTELOPE CREEK		COUNTY: DUCHESNE
STATE: UTAH		11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SITA STATUS EXTENSION <input type="checkbox"/> APD EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input checked="" type="checkbox"/> OTHER
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 10/5/2015	OTHER: Drill Out Plug and Clean
<input type="checkbox"/> SPUD REPORT Date of Spud:	
<input type="checkbox"/> DRILLING REPORT Report Date:	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Please see attached.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 November 12, 2015

NAME (PLEASE PRINT) Rodrigo Jurado	PHONE NUMBER 435 722-5302	TITLE Regulatory & Compliance Spc
SIGNATURE N/A	DATE 11/10/2015	

October 7, 2015

EPA
ATTN: Don Breffle
Region 8
1595 Wynkoop Street
Denver, CO 80202-8917

UIC Permit #UT2736-04234
Well ID: Ute Tribal 05-10
Ute Tribal No. 05-10, Duchesne County, Utah

Dear Mr. Breffle,

Please find enclosed the successful MIT test for the above referenced well. This test was performed to provide proof of integrity after we rigged up on the well to address a loss of mechanical integrity and perform workover operations.

On September 7, 2015 the above referenced well lost Mechanical Integrity. Further research into the well's history led Petroglyph staff to conclude that the well's performance could be improved by injecting into perforations previously plugged back. The well had a CIBP at 5350'. On September 21, 2015 Petroglyph rigged up on the well. We released the packer and pulled the tubing, laying down the whole string. We picked up new tubing, bit and scrapper and ran in and tagged sand at 5300', drilled out sand and tagged cement and CIBP @ 5340. We drilled out and milled out cement and CIBP, chased parts to 6270' and circulated well. We made 2 bit and scrapper runs past all perforations, and circulated and cleaned well. We then rigged up a wireline truck and ran in and set a new CIBP at 6200' and spotted 10' of cement on top. We tested the plug and cement to 4000 Psi with no loss. Removal of the previous plug opened perfs at: 6062-70, 6038-44, 5826-40, 5707-16, 5422-30 & 5380-94. All Perforations are within the permitted injection interval. No new perforations were shot. The perf's injection rates were tested and all tools were pulled out of the hole. We then picked up a new Arrowset 1 Packer and ran in hole, set the packer and performed an MIT on the casing to 1820 Psi with no loss.

Please let us know if there is a need for further action on our part and we will immediately comply. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,

Rodrigo Jurado
Regulatory Compliance Spc

Encl: MIT

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

5. LEASE DESIGNATION AND SERIAL NUMBER:
14-20-H62-3504

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Ute Indian Tribe

7. UNIT or CA AGREEMENT NAME:
14-20-H62-4650

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL
OIL WELL ☐ GAS WELL ☐ OTHER Injection Well

8. WELL NAME and NUMBER:
Ute Tribal 05-10

2. NAME OF OPERATOR:
Petroglyph Operating Company Inc.

9. API NUMBER:
4301330938

3. ADDRESS OF OPERATOR:
P.O. Box 607 CITY Roosevelt STATE UT ZIP 84066

PHONE NUMBER:
(435) 722-2531

10. FIELD AND POOL, OR WILDCAT:
Antelope Creek

4. LOCATION OF WELL

FOOTAGES AT SURFACE: **2068' FSL, 2093' FEL**

COUNTY: **Duchesne**

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: **NWSE 5 5S 3W U**

STATE:
UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 10/5/2015	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Drill Out Plug and Clean Out</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

On September 7, 2015 the above referenced well lost Mechanical Integrity. Further research into the well's history led Petroglyph staff to conclude that the well's performance could be improved by injecting into perforations previously plugged back. The well had a CIBP at 5350'. On September 21, 2015 Petroglyph rigged up on the well. We released the packer and pulled the tubing, laying down the whole string. We picked up new tubing, bit and scrapper and ran in and tagged sand at 5300', drilled out sand and tagged cement and CIBP @ 5340. We drilled out and milled out cement and CIBP, chased parts to 6270' and circulated well. We made 2 bit and scrapper runs past all perforations, and circulated and cleaned well. We then rigged up a wireline truck and ran in and set a new CIBP at 6200' and spotted 10' of cement on top. We tested the plug and cement to 4000 Psi with no loss. Removal of the previous plug opened perfs at: 6062-70, 6038-44, 5826-40, 5707-16, 5422-30 & 5380-94. All Perforations are within the permitted injection interval. No new perforations were shot. The perf's injection rates were tested and all tools were pulled out of the hole. We then picked up a new Arrowset 1 Packer and ran in hole, set the packer and performed an MIT on the casing to 1820 Psi with no loss.

NAME (PLEASE PRINT) Rodrigo Jurado

TITLE Regulatory Compliance Specialist

SIGNATURE 

DATE 11/10/2015

(This space for State use only)

Mechanical Integrity Test Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 10, 5, 15
Test conducted by: CHAD STEVENSON
Others present: _____

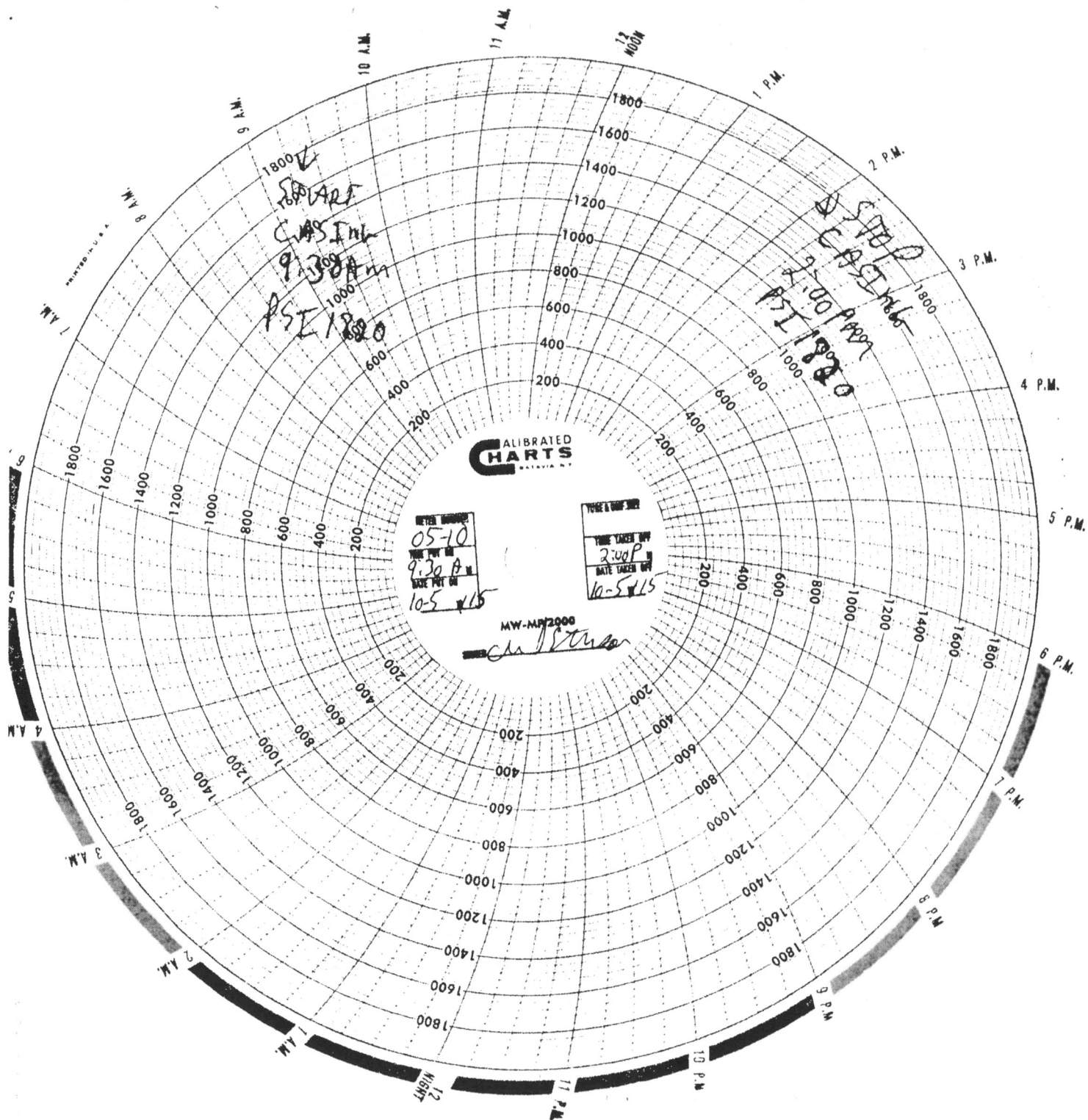
Well Name: <u>05-10</u>		Type: ER SWD	Status: AC TA UC
Field: <u>ANTELOPE CREEK</u>			
Location: <u>05-10</u>	Sec: _____	T _____ N/S R _____	E/W County: <u>DUCHESNE</u> State: <u>UT</u>
Operator: <u>PETROGLYPH ENERGY</u>			
Last MIT: _____		Maximum Allowable Pressure: _____ PSIG	

Regularly scheduled test? ☐ Yes ☐ No
Initial test for permit? ☐ Yes ☐ No
Test after well rework? ☒ Yes ☐ No

Well injecting during test? If Yes, rate: _____ bpd
Pre-test annulus pressure: _____ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING	PRESSURE RECORD		
Initial Pressure	390 psig	psig	psig
End of test pressure	390 psig	psig	psig
CASING / TUBING ANNULUS	PRESSURE RECORD		
0 minutes	1820 psig	psig	psig
5 minutes	1820 psig	psig	psig
10 minutes	1820 psig	psig	psig
15 minutes	1820 psig	psig	psig
20 minutes	1820 psig	psig	psig
25 minutes	1820 psig	psig	psig
30 minutes	1820 psig	psig	psig
4 Hours minutes	1820 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	[] Pass [] Fail	[] Pass [] Fail	[] Pass [] Fail

Does the annulus pressure build back up after the test? If Yes, _____ psig.



Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

Units of Measurement: Standard

multi-chem®

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: PETROGLYPH OPERATING CO INC - EBUS

Sales Rep: James Patry

Well Name: UTE TRIBAL 05-10 INJ, DUCHESNE

Lab Tech: Gary Peterson

Sample Point: Well Head

Sample Date: 1/6/2016

Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample ID: WA-327576

Sample Specifics		Analysis @ Properties in Sample Specifics			
		Cations		Anions	
		mg/L		mg/L	
Test Date:	1/7/2016	Sodium (Na):	3949.75	Chloride (Cl):	5500.00
System Temperature 1 (°F):	60	Potassium (K):	8.01	Sulfate (SO4):	500.00
System Pressure 1 (psig):	2000	Magnesium (Mg):	71.07	Bicarbonate (HCO3):	1220.00
System Temperature 2 (°F):	180	Calcium (Ca):	158.04	Carbonate (CO3):	
System Pressure 2 (psig):	50	Strontium (Sr):	5.11	Acetic Acid (CH3COO)	
Calculated Density (g/ml):	1.0054	Barium (Ba):	1.57	Propionic Acid (C2H5COO)	
pH:	6.50	Iron (Fe):	2.67	Butanoic Acid (C3H7COO)	
Calculated TDS (mg/L):	11448.08	Zinc (Zn):	1.92	Isobutyric Acid ((CH3)2CHCOO)	
CO2 in Gas (%):		Lead (Pb):	0.68	Fluoride (F):	
Dissolved CO2 (mg/L):	80.00	Ammonia NH3:		Bromine (Br):	
H2S in Gas (%):		Manganese (Mn):	0.06	Silica (SiO2):	29.20
H2S in Water (mg/L):	0.00	Aluminum (Al):	0.04	Calcium Carbonate (CaCO3):	
Tot. Suspended Solids (mg/L):		Lithium (Li):	1.13	Phosphates (PO4):	5.25
Corrosivity (Langlier Sat. Index):	0.00	Boron (B):	1.79	Oxygen (O2):	
Alkalinity:		Silicon (Si):	13.65		

Notes:

S=174.04

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.44	56.77	0.87	0.81	0.00	0.00	0.79	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	0.28	37.25	0.90	0.82	0.00	0.00	0.61	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	0.17	23.64	0.92	0.82	0.00	0.00	0.48	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	0.07	9.77	0.96	0.83	0.00	0.00	0.35	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	0.00	0.00	1.01	0.84	0.00	0.00	0.22	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	0.00	0.00	1.07	0.86	0.00	0.00	0.09	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	0.00	0.00	1.15	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.00	0.00	1.24	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.00	0.00	1.34	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.00	0.00	1.47	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

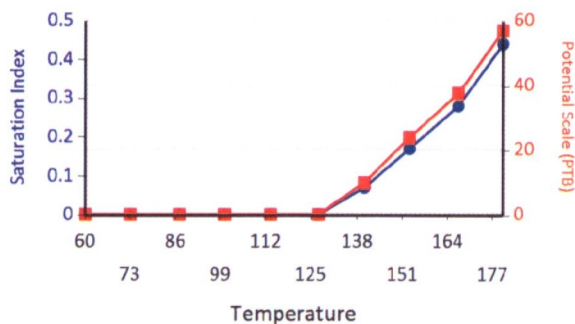
Water Analysis Report

Temp (°F)	PSI	Hemihydrate CaSO ₄ ·0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.85
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

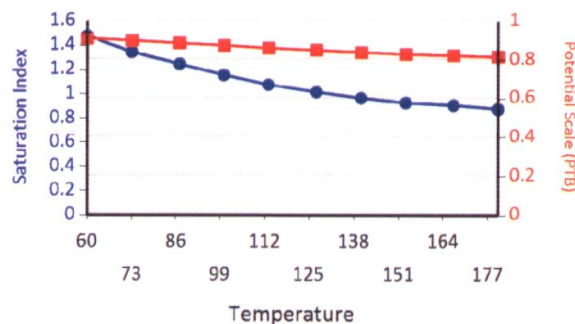
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Barium Sulfate

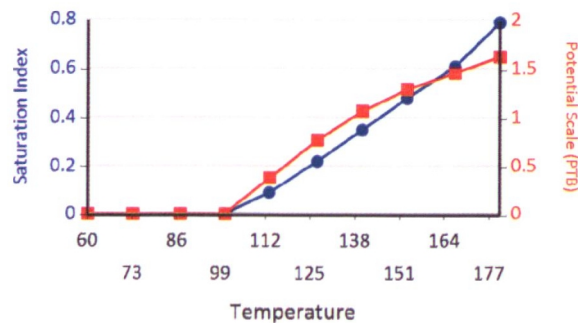
Calcium Carbonate



Barium Sulfate

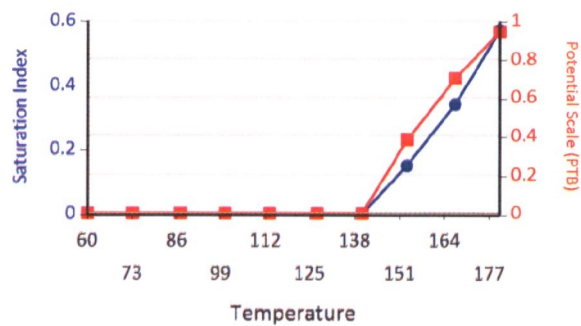


Iron Carbonate

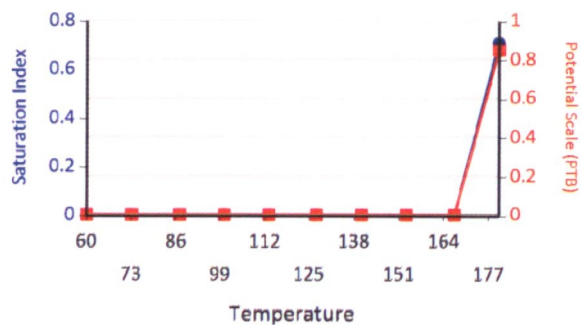


Water Analysis Report

Zinc Carbonate



Fe Silicate





February 10, 2016

Underground Injection Control Enforcement
U.S. Environmental Protection Agency
Atten: Don Breffle / Gary Wang
1595 Wynkoop St.
Denver, CO 80202

RECEIVED

FEB 17 2016

Office of Enforcement, Compliance
and Environmental Justice (UFO)

Mr. Breffle and Mr. Wang:

Please find enclosed the following annual reporting materials from Petroglyph Operating Company, Inc., for its Antelope Creek Water Flood Program, Permit Number UT2736-00000:

- Annual Disposal/Injection Well Monitoring Report for each of the 111 wells
- Related supporting documentation, to include copies of notices and successful Mechanical Integrity Tests
- Water Analysis reports

During 2015, POCI experienced a loss of mechanical integrity in the following wells:

- Ute Tribal 05-08
- Ute Tribal 05-10
- Ute Tribal 19-11
- Ute Tribal 21-04
- Ute Tribal 21-15
- Ute Tribal 29-12
- Ute Tribal 33-14D3

All wells were subsequently repaired and passed a Mechanical Integrity Test. Approvals were received for all wells.

Maximum Allowable Injection Pressure was exceeded for the Ute Tribal 16-07 (October 2015), Ute Tribal 18-14 (August 2015), Ute Tribal 29-12 (May-June 2015) as a result of performing step rate tests.

Thank you for your time. If any questions, please contact me at the following number: (208) 685-9711.

Best Regards,

Nicole Colby

Manager, Land & Regulatory Compliance; Petroglyph Energy, Inc.

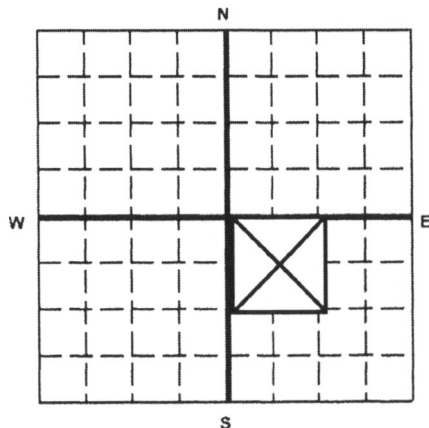
PETROGLYPH OPERATING COMPANY, INC.


 United States Environmental Protection Agency
 Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

 Name and Address of Existing Permittee
 Petroglyph Operating Company, Inc. 2258
 P.O. Box 7608
 Boise, Idaho 83709

 Name and Address of Surface Owner
 Ute Indian Tribe
 P.O. Box 70
 Ft. Duchesne, Utah 84026

 Locate Well and Outline Unit on
 Section Plat - 640 Acres

 State Utah County Duchesne Permit Number UT2736-04234

Surface Location Description

 1/4 of 1/4 of NW 1/4 of SE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

 Location 2068 ft. from (N/S) S Line of quarter section
 and 2093 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY

- ☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
☒ Area

 Number of Wells 111

 Lease Name Ute Indian Tribe

 Well Number UTE TRIBAL 05-10

 TUBING -- CASING ANNULUS PRESSURE
 (OPTIONAL MONITORING)

		INJECTION PRESSURE		TOTAL VOLUME INJECTED			
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1988	2019	895		0	0
February	14	1956	2001	663		0	0
March	14	1957	2012	1006		0	0
April	14	1989	1999	1085		0	0
May	14	1988	2008	1121		0	0
June	14	1893	1962	891		0	0
July	14	1961	2008	786		0	0
August	14	1969	1997	695		0	0
September	14	1863	1971	713		0	0
October	14	1931	1962	903		0	0
November	14	1951	1978	976		0	0
December	14	1896	2016	918		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Chad Stevenson, Water Facilities Supervisor

Signature

Date Signed

2/10/2015

EPA Form 7520-11 (Rev. 12-08)

U2 Entered

Date

3/20/15

Initial

GW

	GREEN	BLUE	CBI
TAB		2	

Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

Units of Measurement: Standard

multi-chem[®]

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: PETROGLYPH OPERATING CO INC - EBUS

Well Name: UTE TRIBAL 05-10 INJ, DUCHESNE

Sample Point: WELLHEAD

Sample Date: 1/7/2015

Sample ID: WA-297467

Sales Rep: James Patry

Lab Tech: Gary Winegar

Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics			
Test Date:	1/14/2015	Cations	mg/L	Anions	mg/L
System Temperature 1 (°F):	160	Sodium (Na):	202.19	Chloride (Cl):	1000.00
System Pressure 1 (psig):	1300	Potassium (K):	3.10	Sulfate (SO ₄):	395.00
System Temperature 2 (°F):	80	Magnesium (Mg):	74.27	Bicarbonate (HCO ₃):	610.00
System Pressure 2 (psig):	15	Calcium (Ca):	148.50	Carbonate (CO ₃):	
Calculated Density (g/ml):	0.9988	Strontium (Sr):	4.35	Acetic Acid (CH ₃ COO)	
pH:	6.90	Barium (Ba):	0.35	Propionic Acid (C ₂ H ₅ COO)	
Calculated TDS (mg/L):	2463.35	Iron (Fe):	1.90	Butanoic Acid (C ₃ H ₇ COO)	
CO ₂ in Gas (%):		Zinc (Zn):	0.32	Isobutyric Acid ((CH ₃) ₂ CHCOO)	
Dissolved CO ₂ (mg/L):	16.00	Lead (Pb):	0.00	Fluoride (F):	
H ₂ S in Gas (%):		Ammonia NH ₃ :		Bromine (Br):	
H ₂ S in Water (mg/L):	5.00	Manganese (Mn):	0.07	Silica (SiO ₂):	23.30

Notes:

B=.79 Al=0 Li=.25

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.25	19.28	1.20	0.20	1.53	1.01	0.17	0.44	0.00	0.00	0.00	0.00	0.00	0.00	9.01	0.17
88.00	157.00	0.19	14.95	1.12	0.19	1.39	0.99	0.15	0.40	0.00	0.00	0.00	0.00	0.00	0.00	8.76	0.17
97.00	300.00	0.23	17.57	1.04	0.19	1.37	0.99	0.21	0.53	0.00	0.00	0.00	0.00	0.00	0.00	8.64	0.17
106.00	443.00	0.26	20.38	0.97	0.19	1.35	0.99	0.28	0.65	0.00	0.00	0.00	0.00	0.00	0.00	8.53	0.17
115.00	585.00	0.30	23.35	0.91	0.18	1.35	0.99	0.35	0.75	0.00	0.00	0.00	0.00	0.00	0.00	8.42	0.17
124.00	728.00	0.35	26.48	0.85	0.18	1.35	0.99	0.41	0.84	0.00	0.00	0.00	0.00	0.00	0.00	8.33	0.17
133.00	871.00	0.39	29.75	0.80	0.18	1.36	0.99	0.48	0.91	0.00	0.00	0.00	0.00	0.00	0.00	8.24	0.17
142.00	1014.00	0.44	33.13	0.76	0.17	1.38	0.99	0.55	0.98	0.00	0.00	0.00	0.00	0.00	0.00	8.16	0.17
151.00	1157.00	0.49	36.62	0.72	0.17	1.40	1.00	0.61	1.04	0.00	0.00	0.00	0.00	0.00	0.00	8.09	0.17
160.00	1300.00	0.54	40.19	0.68	0.16	1.43	1.00	0.68	1.09	0.00	0.00	0.00	0.00	0.00	0.00	8.02	0.17

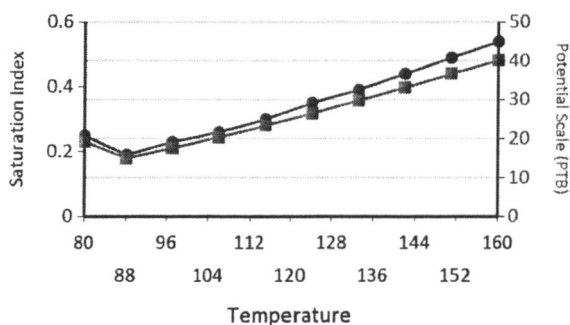
		Hemihydrate CaSO ₄ ·0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.43
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.70

Water Analysis Report

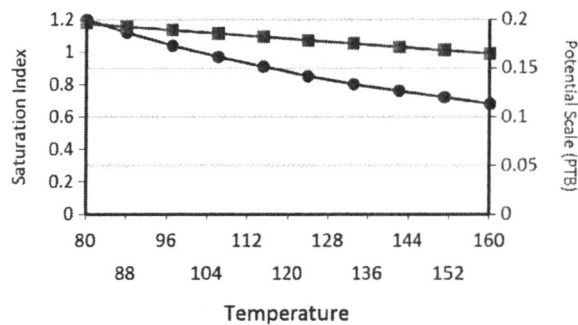
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Fe Silicate

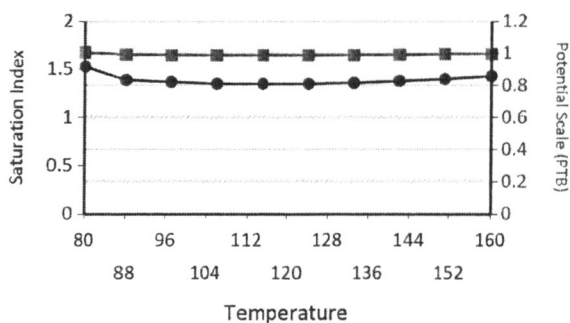
Calcium Carbonate



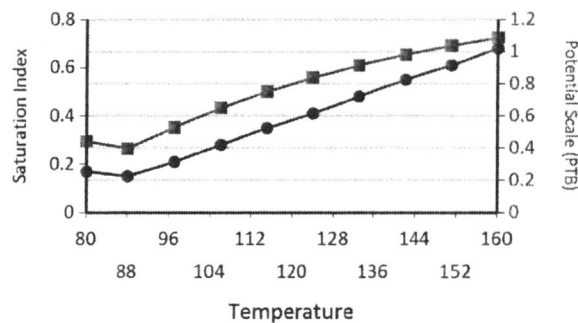
Barium Sulfate



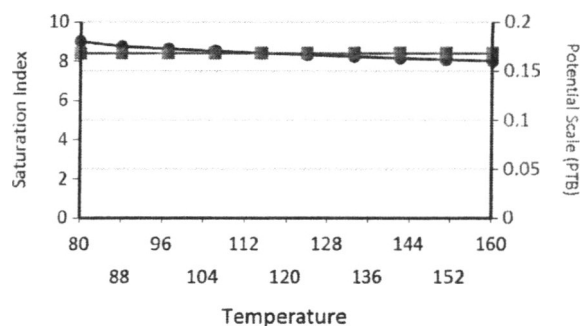
Iron Sulfide



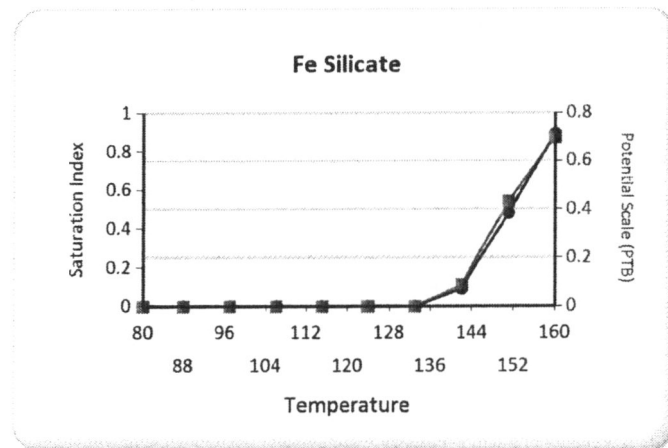
Iron Carbonate



Zinc Sulfide



Water Analysis Report



RECEIVED

SEP 11 2015

Office of Enforcement, Compliance
and Environmental Justice (UFO)

September 8, 2015

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit #UT2736-04234
Well No. Ute Tribal 05-10
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Breffle:

Please be advised that on September 7, 2015 we lost Mechanical Integrity on the Ute Tribal 05-10 Injection Well. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,
Petroglyph Operating Company, Inc.



Rodrigo Jurado
Regulatory Compliance Specialist

U2 Entered
Date 9/16/15
Initial 83

	GREEN	BLUE	CBI
TAB		2	

RECEIVED

October 7, 2015

OCT 20 2015

Office of Enforcement, Compliance
and Environmental Justice (UFO)

EPA
ATTN: Don Breffle
Region 8
1595 Wynkoop Street
Denver, CO 80202-8917

UIC Permit #UT2736-04234
Well ID: Ute Tribal 05-10
Ute Tribal No. 05-10, Duchesne County, Utah

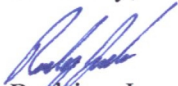
Dear Mr. Breffle,

Please find enclosed the successful MIT test for the above referenced well. This test was performed to provide proof of integrity after we rigged up on the well to address a loss of mechanical integrity and perform workover operations.

On September 7, 2015 the above referenced well lost Mechanical Integrity. Further research into the well's history led Petroglyph staff to conclude that the well's performance could be improved by injecting into perforations previously plugged back. The well had a CIBP at 5350'. On September 21, 2015 Petroglyph rigged up on the well. We released the packer and pulled the tubing, laying down the whole string. We picked up new tubing, bit and scrapper and ran in and tagged sand at 5300', drilled out sand and tagged cement and CIBP @ 5340. We drilled out and milled out cement and CIBP, chased parts to 6270' and circulated well. We made 2 bit and scrapper runs past all perforations, and circulated and cleaned well. We then rigged up a wireline truck and ran in and set a new CIBP at 6200' and spotted 10' of cement on top. We tested the plug and cement to 4000 Psi with no loss. Removal of the previous plug opened perfs at: 6062-70, 6038-44, 5826-40, 5707-16, 5422-30 & 5380-94. All Perforations are within the permitted injection interval. No new perforations were shot. The perf's injection rates were tested and all tools were pulled out of the hole. We then picked up a new Arrowset 1 Packer and ran in hole, set the packer and performed an MIT on the casing to 1820 Psi with no loss.

Please let us know if there is a need for further action on our part and we will immediately comply. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,



Rodrigo Jurado
Regulatory Compliance Spc

Encl: MIT

	GREEN	BLUE	CBI
TAB		2	

U2 Entered

Date 10/13/15

Initial JB

Mechanical Integrity Test Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 10/5/15
Test conducted by: CHAD STEVENSON
Others present: _____

Well Name: <u>05-10</u>	Type: ER SWD	Status: AC TA UC
Field: <u>ANTELOPE CREEK</u>		
Location: <u>05-10</u> Sec: _____ T _____ N/S R _____ E/W County: <u>DUCHESNE</u> State: <u>UT</u>		
Operator: <u>PETROGLYPH ENERGY</u>		
Last MIT: <u>1</u> / <u>1</u> Maximum Allowable Pressure: _____ PSIG		

Regularly scheduled test? ☐ Yes ☐ No
Initial test for permit? ☐ Yes ☐ No
Test after well rework? ☒ Yes ☐ No

Well injecting during test? If Yes, rate: _____ bpd
Pre-test annulus pressure: _____ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING	PRESSURE RECORD		
Initial Pressure	390 psig	psig	psig
End of test pressure	390 psig	psig	psig
CASING / TUBING ANNULUS	PRESSURE RECORD		
0 minutes	1820 psig	psig	psig
5 minutes	1820 psig	psig	psig
10 minutes	1820 psig	psig	psig
15 minutes	1820 psig	psig	psig
20 minutes	1820 psig	psig	psig
25 minutes	1820 psig	psig	psig
30 minutes	1820 psig	psig	psig
4 Hours minutes	1820 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test? If Yes, _____ psig.

PRINTED IN U.S.A.

**CALIBRATED
CHARTS**
BATAVIA, N.Y.

METER NUMBER

05-10

TIME PUT ON

9:30 A.M.

DATE PUT ON

10-5-15

TUBE & ORIF. SIZE

TIME TAKEN OFF

2:00 P.M.

DATE TAKEN OFF

10-5-15

MW-MP/2000

Chilton

START
CASI mb
9:30 AM
PSI 1820

STOP
CASI mb
2:00 PM
PSI 1820



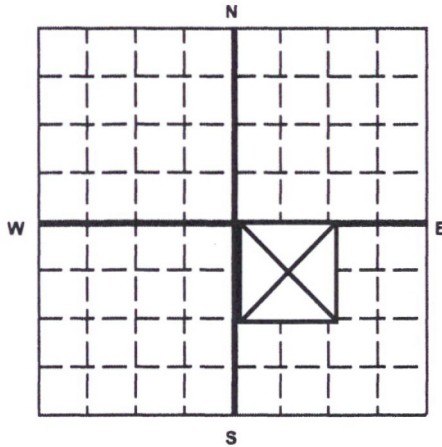
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on
Section Plat - 640 Acres



State
Utah

County
Duchesne

Permit Number
UT2736-04234

Surface Location Description

1/4 of 1/4 of NW 1/4 of SE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

Location 2068 ft. from (N/S) S Line of quarter section
and 2093 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY

- ☐ Brine Disposal
☒ Enhanced Recovery
☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
☒ Area

Number of Wells 111

Lease Name Ute Indian Tribe

Well Number UTE TRIBAL 05-10

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	13	1803	1950	489		0	0
February	13	1936	2012	588		0	0
March	13	1957	2022	516		0	0
April	13	1960	1968	603		0	0
May	13	1969	1998	569		0	0
June	13	1921	1988	500		0	0
July	13	1941	1986	402		0	0
August	13	1830	1982	362		0	0
September	13	1822	1915	495		0	0
October	13	1943	1977	734		0	0
November	13	1979	2002	856		0	0
December	13	1963	1977	820		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

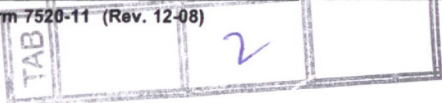
Chad Stevenson, Water Facilities Supervisor

Signature

Chad Stevenson

Date Signed

2/11/2014



Date 3/18/14
Initial JS

Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

Units of Measurement: **Standard**

multi-chem®

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**Sales Rep: **James Patry**Well Name: **UTE TRIBAL 05-10 INJ**Lab Tech: **Gary Winegar**Sample Point: **Wellhead**Sample Date: **1/8/2014**Sample ID: **WA-262965**Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics			
Test Date:	1/15/2014	Cations	mg/L	Anions	mg/L
System Temperature 1 (°F):	180	Sodium (Na):	4369.93	Chloride (Cl):	6000.00
System Pressure 1 (psig):	1300	Potassium (K):	51.00	Sulfate (SO ₄):	97.00
System Temperature 2 (°F):	60	Magnesium (Mg):	25.00	Bicarbonate (HCO ₃):	1659.20
System Pressure 2 (psig):	15	Calcium (Ca):	56.00	Carbonate (CO ₃):	
Calculated Density (g/ml):	1.006	Strontium (Sr):	5.20	Acetic Acid (CH ₃ COO)	
pH:	8.40	Barium (Ba):	7.00	Propionic Acid (C ₂ H ₅ COO)	
Calculated TDS (mg/L):	12351.75	Iron (Fe):	55.00	Butanoic Acid (C ₃ H ₇ COO)	
CO ₂ in Gas (%):		Zinc (Zn):	0.31	Isobutyric Acid ((CH ₃) ₂ CHCOO)	
Dissolved CO ₂ (mg/L):	0.00	Lead (Pb):	0.11	Fluoride (F):	
H ₂ S in Gas (%):		Ammonia NH ₃ :		Bromine (Br):	
H ₂ S in Water (mg/L):	0.00	Manganese (Mn):	0.33	Silica (SiO ₂):	25.68

Notes:

B=4.9 Al=.22 Li=1.2

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	1.45	41.91	1.60	4.06	0.00	0.00	3.21	39.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.46	41.75	1.46	4.02	0.00	0.00	3.28	39.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.48	42.24	1.33	3.96	0.00	0.00	3.35	39.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.50	42.76	1.22	3.90	0.00	0.00	3.41	39.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.53	43.32	1.12	3.84	0.00	0.00	3.48	39.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.56	43.88	1.03	3.76	0.00	0.00	3.55	39.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.60	44.44	0.96	3.69	0.00	0.00	3.61	39.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.64	44.98	0.90	3.62	0.00	0.00	3.67	39.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.69	45.50	0.84	3.55	0.00	0.00	3.73	39.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.73	45.98	0.80	3.48	0.00	0.00	3.79	39.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

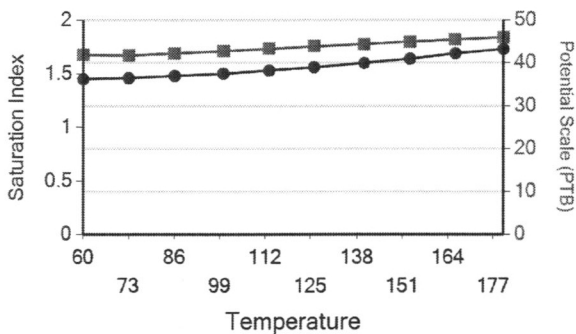
Water Analysis Report

Temp (°F)	PSI	Hemihydrate CaSO ₄ ·0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.00	0.00	0.73	5.09	0.24	1.99	10.80	27.81
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.09	0.00	0.00	1.19	7.77	0.46	3.42	10.99	27.81
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.13	0.00	0.00	1.72	10.80	0.74	5.11	11.27	27.83
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.16	0.00	0.00	2.27	13.77	1.02	6.78	11.58	27.83
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.18	0.00	0.00	2.82	16.68	1.32	8.38	11.90	27.84
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.19	0.00	0.00	3.39	19.50	1.63	9.89	12.25	27.84
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.19	0.00	0.00	3.95	22.19	1.94	11.27	12.60	27.85
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23	0.20	0.00	0.00	4.51	24.66	2.25	12.47	12.97	27.85
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35	0.20	0.00	0.00	5.08	26.81	2.57	13.49	13.34	27.85
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47	0.20	0.00	0.00	5.63	28.50	2.88	14.29	13.72	27.85

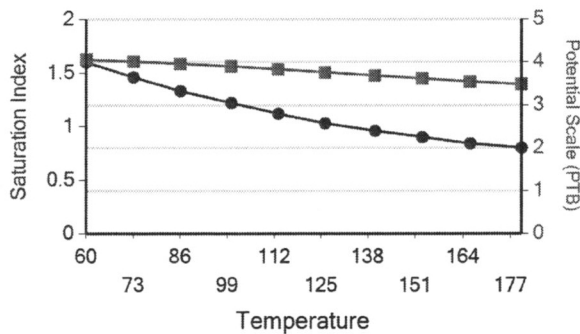
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

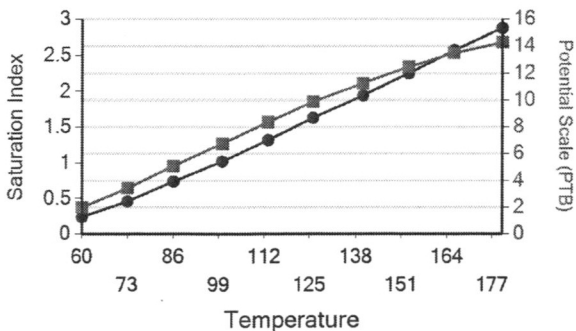
Calcium Carbonate



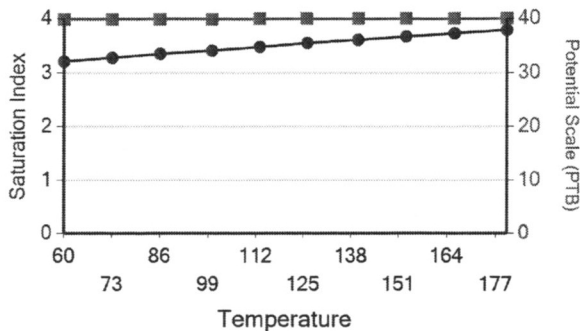
Barium Sulfate



Ca Mg Silicate

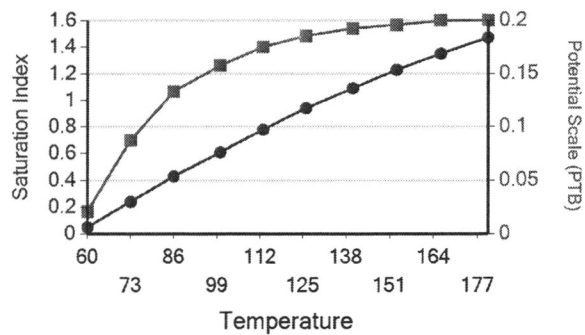


Iron Carbonate

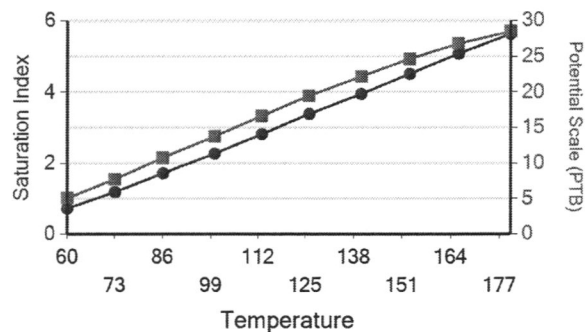


Water Analysis Report

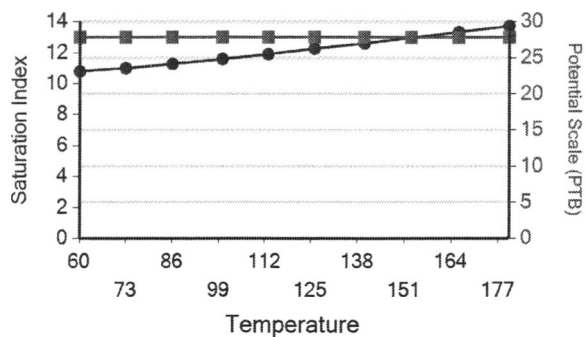
Zinc Carbonate



Mg Silicate



Fe Silicate





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

AUG 28 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: UNDERGROUND INJECTION CONTROL (UIC)
APPROVAL TO INCREASE MAXIMUM
SURFACE INJECTION PRESSURE
EPA Area Permit No. UT2736-00000
Ute Tribal No. 05-10
EPA Well Authority No. UT04234
Antelope Creek Waterflood
Duchesne County, Utah

Dear Mr. Safford:

The Environmental Protection Agency (EPA) Antelope Creek Final Area Permit UT2736-00000 (Effective July 12, 1994) Part II, Section C. 5. (b), permits the "Director" to authorize, by letter, an increase in the maximum surface injection pressure (MIP) for the Ute Tribal No. 05-10, following receipt and approval of a valid step-rate test (SRT).

On August 3, 2001, Petroglyph Energy, Inc. (Petroglyph) submitted an SRT to the EPA, dated July 20, 2001. The SRT was received by the EPA on August 10, 2001. The SRT was reviewed and approved by the EPA on August 10, 2001. The SRT shows the fracture gradient (FG) for the Green River Formation injection interval between the approximate depths of 3,750' and 5,850' to be 0.90 psi/ft.

As of the date of this letter, the EPA authorizes an increase in the maximum surface injection pressure (MSIP) from 1900 psig to 2055 psig. The following modified injection pressure will provide for higher injectivity capacity which will improve the waterflood efficiency without endangering any underground sources of drinking water (USDWs).



Printed on Recycled Paper

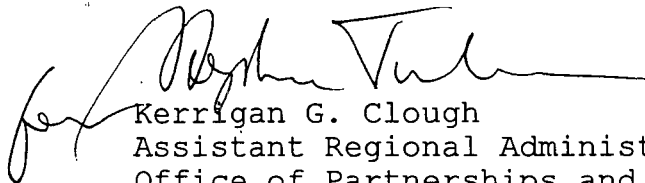
FG = 0.90 psi/ft
D = 4426 feet: top of perforations
SG = Specific gravity of injectate: 1.005
0.433 = Density of injectate fluid
MIP = [(0.90) - (.433)(1.005)] 4426

MSIP = 2055 psig

Please send all compliance correspondence relative to this well to the **ATTENTION: Nathan Wiser, at the letterhead address, citing Mail Code: 8ENF-T very prominently.** You may call Mr. Wiser at 303.312.6211.

All other provisions and conditions of the Permit remain as originally issued July 12, 1994 and Revised April 30, 1998.

Sincerely,



Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Coordinator
Ute Indian Tribe

Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas & Mining

Mr. Nathan Wiser
8ENF-T

Step Rate Test (SRT) Analysis

Date: 08/10/01

Operator: Petroglyph Energy, Inc.

Well: Ute Tribal 05-10

Permit #: UT2736-04234

Enter the following data :

Specific Gravity (SG) of injectate	1.005	g/cc
Depth to top perforation(D)	4426	feet
Depth to Top of permitted injection zone	3750	feet
Estimated Formation Parting Pressure (P _{fp}) from SRT chart	2060	psi
Instantaneous Shut In Pressure (ISIP) from SRT	2120	psi
Bottom Hole Parting Pressure (from downhole pressure recorder)		psi

2060

Part One - Calculation of Fracture Gradient (F G)

Calculated Fracture Gradient = 0.900 psi/ft.

$FG = P_{bhp} / \text{Depth (D) of top perforation}$
(Uses downhole recorded bottom hole parting pressure when available)

0.901

Calculated Bottom Hole Parting Pressure = 3986 psi

Calculated $P_{bhp} = \text{Formation Fracture Pressure} + (0.433 * SG * D)$
(Use lesser of ISIP or P_{fp}) value used = 2060

3986

Part Two - Calculation of Maximum Surface Injection Pressure (M S I P)

Maximum Surface Injection Pressure = 2055 psig
(rounded down to nearest 5 psig)

$MSIP = [FG - (0.433 * SG)] * \text{Depth to top of permitted injection zone (or top perforation)}$

4426

2057



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

MAY 12 1995

Ref: 8WM-DW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

R. A. Christensen, President
Petroglyph Operating Company, Inc.
6209 North Highway 61
Hutchinson, Kansas 67502

*Scan under
UT20736-04234
Authorization to
Inject & Final*

RE: UNDERGROUND INJECTION CONTROL (UIC)
Authorization to Inject
Antelope Creek Field Waterflood
EPA Area Permit No. UT2736-00000
Duchesne County, Utah

Dear Mr. Christensen:

A request for authorization to inject into the two recently converted wells listed below was received from Petroglyph's Roosevelt, Utah office on May 9, 1995. The Well Rework Records, well schematics, and mechanical integrity test results were included with the request. Petroglyph has complied with all pertinent conditions [Part II, C. 1.] of the area permit which includes these two wells, and may begin injection operations.

<u>Well</u>	<u>Location</u>	<u>EPA Permit No.</u>
Ute Tribal #1-29	SE/4 Sec 29, T5S-R3W	UT2736-04233
Ute Tribal #3-5 E3	SE/4 Sec 5, T5S-R3W	UT2736-04234

Please be aware of the monitoring, recordkeeping, and reporting obligations described in Part II, Section D of the permit. If you have any questions on this action, you may call John Carson at (303) 293-1435. Also, please direct all correspondence to the attention of John Carson at Mail Code 8WM-DW.

Sincerely,

Thomas J. Pike
Chief
UIC Implementation Section

cc: Ms. Deanna Rice
Petroglyph Operating Company, Inc.
P.O. Drawer 607
Roosevelt, Utah 84066



Printed on Recycled Paper

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: **8/28/01 CW 4154C & Mr. Micheal Safford 4155C**
Operations Coordinator
Petroglyph Operating Co., Inc.
P.O. Box 607
Roosevelt, UT 84066

AUG 28 2001

(UT 2736-04234)
 UTE TRIBAL NO. 05-10

2. Article Number (Copy from service label)

7001 0320 0005 9387 1826

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature

X

☐ Agent

☒ Addressee

D. Is delivery address different from item 1?

If YES, enter delivery address below:

☐ Yes

☐ No

SEP 5 2001

3. Service Type

☒ Certified Mail

☐ Express Mail

☐ Registered

☐ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

8/28/01 To Micheal Safford
 Petroglyph Operating Company, Inc.

(mailed together: Original green card)

1. UTE TRIBAL NO. 05-10

(UT 2736-04234)

(# 4154C)

2. UTE TRIBAL NO. 19-01

(UT 2736-04502)

(# 4155C)

U.S. Postal Service

CERTIFIED MAIL RECEIPT

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage \$

Certified Fee

Return Receipt Fee (Endorsement Required)

Restricted Delivery Fee (Endorsement Required)

Total Postage & Fees \$

Postmark Here

AUG 28 2001

Sent To **Mr. Micheal Safford**
Operations Coordinator
Petroglyph Operating Co., Inc.
P.O. BOX 607
Roosevelt, UT 84066

PS Form 3800, January 2001

See Reverse for Instructions

U.S. Postal Service

CERTIFIED MAIL RECEIPT

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage \$

Certified Fee

Return Receipt Fee (Endorsement Required)

Restricted Delivery Fee (Endorsement Required)

Total Postage & Fees \$

Postmark Here

AUG 28 2001

Sent To **Mr. Micheal Safford**
Operations Coordinator
Petroglyph Operating Co., Inc.
P.O. BOX 607
Roosevelt, UT 84066

PS Form 3800, January 2001

See Reverse for Instructions

7001 0320 0005 9387 1826

7001 0320 0005 9387 1826